

WHAT IS CLAIMED IS:

1. A dome-shaped contact composed of an elastic conductive plate, comprising:

a first dome portion;

5 a first spacer portion that is disposed along the outer periphery of said first dome portion; and

a second dome portion that is disposed at the center of said first dome portion with a second spacer portion interposed between the first and second dome portions;

10 wherein said first dome portion and said second dome portion bulge in the same direction,

said first and second spacer portions are both conical and tapered in said bulge direction, and

15 the radius of curvature of said second dome portion is smaller than the radius of curvature of said first dome portion.

2. The dome-shaped contact of Claim 1, wherein said second dome portion has a protrusion that extends in the direction opposite to said bulge direction.

20 3. The dome-shaped contact of Claim 2, wherein at least a surface of said elastic metal plate facing in the direction opposite to said bulge direction is plated with Ni or with Ag and Ni.

4. The dome-shaped contact of Claim 1, wherein said first dome portion has a plurality of openings.

25 5. The dome-shaped contact of Claim 1, wherein, supposing that the outer diameter of said first spacer portion is denoted by R, and the outer diameter of said second spacer portion is denoted by r, the ratio r/R falls within a range of $0.4 \leq r/R \leq 0.6$.

6. A multi-step operation electrical switch having a contact formed on a board and a dome-shaped elastic conductive plate, comprising:

a first dome portion;

5 a first spacer portion that is disposed along the outer periphery of said first dome portion;

a second dome portion that is disposed at the center of said first dome portion with a second spacer portion interposed between the first and second dome portions;

a first electrode that faces the first dome portion; and

10 a second electrode that faces the second dome portion,

wherein said first dome portion and said second dome portion bulge in the same direction,

said first and second spacer portions are both conical and tapered in said bulge direction, and

15 the radius of curvature of said second dome portion is smaller than the radius of curvature of said first dome portion.

7. A multi-step operation electrical switch having a contact formed on a board and a dome-shaped elastic conductive plate, said elastic plate

20 being deformed to come into electrical contact with said contact when the elastic plate is pressed, and said elastic plate being restored to the initial shape and electrically disconnected from said contact when a pressing force is removed, the multi-step operation electrical switch comprising:

a first dome portion that is a part of said elastic plate, bulges in the direction opposite to the direction in which the elastic plate is pressed, and is
25 depressed by a pressing force applied thereto;

a first electrode that is formed on the board and comes into contact with said first dome portion when the first dome portion is depressed;

a first spacer portion that is a part of said elastic plate and serves to maintain a clearance between the first dome portion and the first contact when said first dome portion is not depressed;

5 a second dome portion that is a part of said elastic plate, bulges in the direction opposite to the direction in which the elastic plate is pressed, and is depressed by a pressing force that is greater than the pressing force applied to depress said first dome portion;

a second electrode that is formed on the board and comes into contact with said second dome portion when the second dome portion is depressed;
10 and

a second spacer portion that is a part of said elastic plate and serves to maintain a clearance between the second dome portion and the second contact when said first dome portion is depressed but said second dome portion is not depressed.

15 8. The multi-step operation electrical switch of Claim 7, wherein a protrusion is formed on the inner surface of said first dome portion, the protrusion extending in the direction opposite to the direction in which the first dome portion bulges and coming into contact with the first electrode when the first dome portion is depressed.

20 9. The multi-step operation electrical switch of Claim 7, wherein an opening is formed in said first dome portion, and a part of the edge of the opening is bent in the direction opposite to the direction in which the first dome portion bulges to form a protrusion that comes into contact with the first electrode when the first dome is depressed.

25 10. The multi-step operation electrical switch of Claim 7, wherein a protrusion is formed on the inner surface of said second dome portion, the protrusion extending in the direction opposite to the direction in which the

second dome portion bulges and coming into contact with the second electrode when the second dome portion is depressed.

11. The multi-step operation electrical switch of any one of Claims 8 to 10, wherein at least a part of said protrusion that comes into contact with the electrode is plated with Ni or with Ag and Ni.

12. The multi-step operation electrical switch of Claim 7, wherein said first spacer portion has a cut for drawing out either or both of wires extending from said first electrode and said second electrode.

13. The multi-step operation electrical switch of Claim 7, wherein said elastic plate is fixed by a sheet covering the elastic plate, and an air release opening is formed in said board or said sheet.

14. The multi-step operation electrical switch of Claim 7, wherein, supposing that the outer diameter of the first spacer portion is denoted by R , and the outer diameter of the second spacer portion is denoted by r , the ratio r/R falls within a range of $0.4 \leq r/R \leq 0.6$.